

PTO-1449 (Modified)	ATTY. DOCKET NO. 00295.77957	SERIAL NUMBER 09/210,747
U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	APPLICANT Briggs and Tatum	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	FILING DATE 9/25/98	GROUP ART UNIT 1645

**U.S. PATENT DOCUMENTS**

## FOREIGN PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS						
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES/NO

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

✓B1 ✓B2 Cruz et al., Nov. 1990, Molecular Microbiology, Vol. 4(11), pages 1933-1939 → Duplicate  
Gentry et al., Ver. Microbiol., April 1988, vol. 16(4), pages 351-367 → Duplicate

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	00295.77957	
	APPLICANT Briggs and Tatum	
	FILING DATE 12/15/98	GROUP ART UNIT 11644/1645

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09/210747

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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE	
VB	4,293,545	10/06/81	Kucera				
	4,335,106	06/15/82	Kucera				
	4,346,074	08/24/82	Gilmour et al.				
	4,388,299	06/14/83	Kucera				
	4,506,017	03/19/85	Kucera				
	4,559,306	12/17/85	Kucera				
	4,626,430	12/02/86	Kucera				
	4,735,801	04/05/88	Stocker et al.				
	4,837,151	06/06/89	Stocker et al.				
	4,888,170	12/19/89	Curtiss				
	4,957,739	09/18/90	Bergel et al.	<u>Duplicate</u>			
	4,999,191	03/12/91	Glisson et al.				
	5,055,400	10/08/91	Lo et al.				
	5,077,044	12/31/91	Stocker et al.				
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VB	Lindberg et al., Dev. Biol. Stand., 1995, Vol. 84, p 211-9

EXAMINER S. Portner	DATE CONSIDERED 2/98
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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet	1	of	1	Complete If Known
				Application Number 09/210,747
				Filing Date December 15, 1998
				First Named Inventor BRIGGS
				Group Art Unit 1645
				Examiner Name V. Portner
				Attorney Docket Number 000295.77957

Sheet	1	of	1	Attorney Docket Number 000295.77957
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### U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
		US- 6,331,303	December 18, 2001	Briggs & Tatum	
		US 6,495,145	December 17, 2002	Briggs & Tatum	
		US 6,573,093	June 3, 2003	Briggs & Tatum	
		20020150584	October 17, 2002	Briggs & Tatum	

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### OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
✓/BD		Lo <i>et al.</i> , "Cloning and expression of the leukotoxin gene of <i>Pasteurella haemolytica A1</i> in <i>Escherichia coli K-12</i> ," <i>Infect Immun</i> 1985 Dec;50(3):667-71 ,	
		Lo <i>et al.</i> , "Nucleotide sequence of the leukotoxin genes of <i>Pasteurella haemolytica A1</i> ," <i>Infect Immun</i> 1987 Sep;55(9):1987-96 ,	
		Strathdee & Lo, "Cloning, nucleotide sequence, and characterization of genes encoding the secretion function of the <i>Pasteurella haemolytica</i> leukotoxin determinant," <i>J Bacteriol</i> 1989 Feb;171(2):916-28	
✓		Highlander <i>et al.</i> , "Secretion and expression of the <i>Pasteurella haemolytica</i> Leukotoxin," <i>J. Bacteriol.</i> 172, 2343-50, 1990	

Examiner Signature	<i>Spa</i>	Date Considered	8/03
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	APPLICANT Briggs and Tatum	
	FILING DATE 12/15/98	GROUP ART UNIT 1647 1648

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE
✓	5,468,485	11/21/95	Curtiss, III			
✓	5,389,368	2/14/95	Curtiss, III			

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## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

✓	Chang et al., "Pneumonic pasteurellosis: Examination of typeable and untypeable <i>Pasteurella haemolytica</i> strains for Leukotoxin Production, Plasmid Content, and Antimicrobial Susceptibility," <i>Am. J. Vet. Res.</i> , 48(3):378-384 (1987)
✓	Homchampa et al., "Molecular Analysis of the <i>aroA</i> Gene of <i>Pasteurella Multocida</i> and Vaccine Potential of a Constructed <i>aroA</i> Mutant," <i>Molecular Microbiology</i> , 6(23):3585-3593 (1992)
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✓	Haghour et al., "Plasmids and Resistance to 9 Chemotherapeutic Agents of <i>Pasteurella multocida</i> and <i>Pasteurella haemolytica</i> ," <i>J. Vet. Med. B</i> 34:509-518 (1987)
✓	Azad et al., "Distinct Plasmid Profiles of <i>Pasteurella haemolytica</i> Serotypes and the Characterization and Amplification of <i>Escherichia coli</i> of Ampicillin-Resistance Plasmids Encoding ROB-1 $\beta$ -lactamase," <i>J. Gen. Microbiology</i> , 138:1185-1196 (1992)

EXAMINER J. P. Polk	DATE CONSIDERED 2/28
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▼	5,210,035	5/11/93	Stocker			

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BP	Hoisteth et al., "Aromatic-dependent <i>Salmonella typhimurium</i> are Non-Virulent and Effective as Live Vaccines," <i>Nature</i> , 291:238-239 (1981)
	Smith et al., "Vaccination of Calves Against <i>Salmonella dublin</i> With Aromatic-Dependent <i>Salmonella typhimurium</i> ," <i>Am. J. Vet. Res.</i> , 45(9):1858 (1984)
	Roberts et al., "Construction and Characterization <i>in vivo</i> of <i>Bordetella pertussis</i> <i>aroA</i> Mutants," <i>Infection and Immunity</i> 58(3):732-738 (1990)
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	O'Giora et al., "Cloning and Characterization of the <i>serC</i> and <i>aroA</i> Genes of <i>Yersinia enterocolitica</i> , and Construction of an <i>aroA</i> mutant," <i>Gene</i> 84:23-30 (1989)
	Chang et al., "Characterization of Plasmids With Antimicrobial Resistant Genes in <i>Pasteurella haemolytica</i> A1," <i>J. DNA Sequencing and Mapping</i> , 389-97 (1992)
▼	Rosmanith et al., "Characterization and Comparison of Antimicrobial Susceptibilities and Outer Membrane Protein and Plasmid DNA profiles of <i>Pasteurella haemolytica</i> and Certain Other Members of the Genus <i>Pasteurella</i> ," <i>Am. J. Vet. Res.</i> , 52(12):2016-2022 (1991)

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BP	1/98

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*[Signature]* Tatum et al., "Isolation, Identification, and Cloning of a Non-Palindromic Type II DNA Restriction Endonuclease *PhaI*, From *Pasteurella haemolytica*", Abstract of presentation at American Society for Microbiology, Annual Meeting, May 1993

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69	Yang et al., J. Bact., 160(1): 15-21 (1984)
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	Wilson, Gene 74: 281 - 289 (1988)
	Marta et al., J. Bact., 171/4:2238 - 2240 (1989)

EXAMINER <i>Bobins</i>	DATE CONSIDERED <i>2/88</i>
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**U.S. PATENT DOCUMENTS**

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**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

BB	<p>Briggs et al., "Characterization of a Restriction Endonuclease, <i>PhaI</i>, from <i>Pasteurella haemolytica</i> Serotype A1 and Protection of Heterologous DNA by a Cloned <i>PhaI</i> Methyltransferase Gene", <i>Applied and Environmental Microbiology</i> 60(6):2006-2010 (1994)</p>
✓	<p>Tatum et al., "Molecular Gene Cloning and Nucleotide Sequencing and Construction of an <i>aroA</i> Mutant of <i>Pasteurella haemolytica</i> Serotype A1"; <i>Applied and Environmental Microbiology</i> 60(6):2011-2016 (1994)</p>

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✓	Old, et al., "Principles of Gene Manipulation", Blackwell Scientific Publications, Oxford, 1989
	Lunnen et al., "Cloning Type-II Restriction and Modification Genes", <i>Gene</i> 74:25-32 (1988)
	Homchampa et al., "Construction and Vaccine Potential of an AroA Mutant of <i>Pasteurella haemolytica</i> ", <i>Veterinary Microbiology</i> 42:35-44 (1994)
✓	International Search Report for PCT/US94/14095 dated May 2, 1995

EXAMINER <i>S. Datta</i>	DATE CONSIDERED 2/95
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PTO-149 (Modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE  INFORMATION DISCLOSURE STATEMENT BY APPLICANT	ATTY. DOCKET NO. 00295.77957	SERIAL NUMBER
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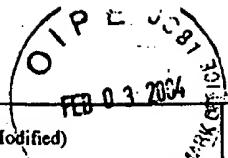
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**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

	Briggs et al., "Characterization of a Restriction Endonuclease, <i>Phal</i> , from <i>Pasteurella haemolytica</i> Serotype A1 and Protection of Heterologous DNA by a Cloned <i>Phal</i> Methyltransferase Gene", <i>Applied and Environmental Microbiology</i> 60(6):2006-2010 (1994)
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